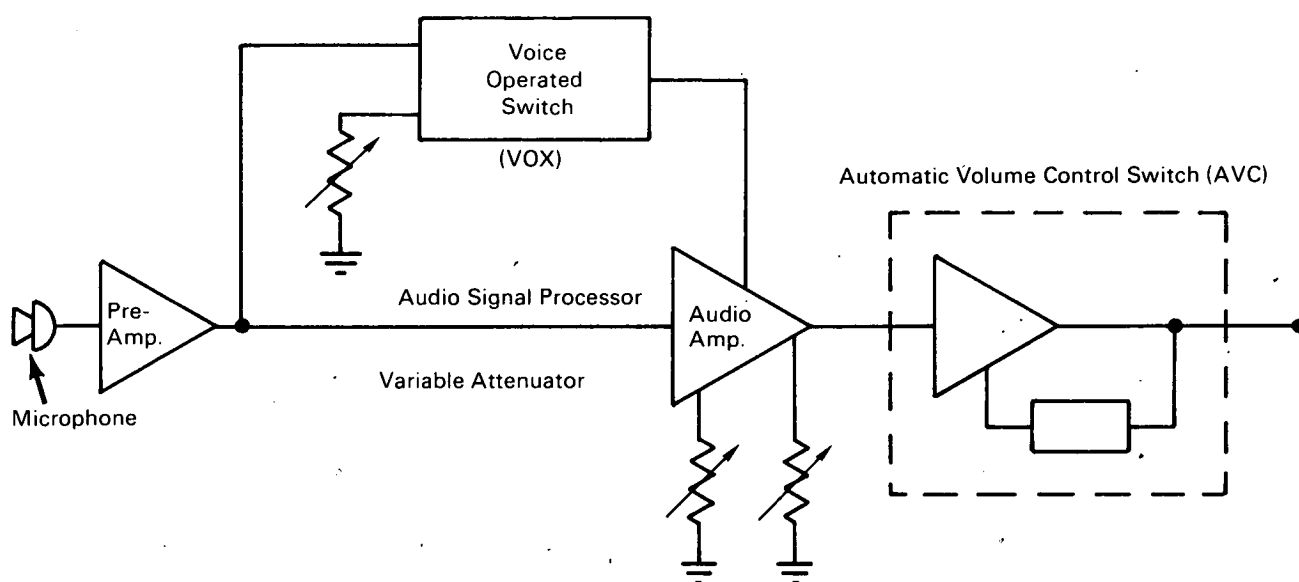


NASA TECH BRIEF



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Audio Signal Processor



The signal-processing system diagrammed above provides automatic volume control for an audio amplifier or a voice communication system without introducing noise surges during pauses in the input, and without losing the initial signal when the input resumes.

The preamplifier output is fed through a variable-gain amplifier to a conventional automatic volume control (AVC) circuit, and also through an audio switch, which detects the presence of a signal and controls the variable-gain amplifier. When the system input halts for more than a moment the audio switch reduces the gain of the amplifier at approximately the same rate as the AVC circuit increases its gain. Thus, the increased AVC gain is nullified, and no noise surge occurs. When the signal resumes, the

audio switch returns the amplifier gain to normal, at a rate approximately equal to the decay of the AVC gain, in order to maintain overall gain at a constant level.

False noise triggering is controlled by setting the detection threshold of the switch slightly above the ambient noise level. A short delay is provided in the switch turn-on time to furnish even greater protection against false triggering by high-amplitude, short-duration impulses.

Note:

Requests for further information may be directed to:
Technology Utilization Officer
Manned Spacecraft Center, Code BM7
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Reference: TSP70-10180

(continued overleaf)

Patent status:

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